

What is claimed is:

1. A method for processing one or more semiconductor wafers, the method comprising the steps of:
  - providing one or more semiconductor wafers in a processing chamber;
  - and
  - drying the one or more semiconductor wafers in the processing chamber wherein during at least a portion of the drying step the one or more semiconductor wafers are in the presence of an antistatic agent.
2. The method of claim 1, wherein the step of drying the one or more semiconductor wafers comprises flowing a drying gas into the processing chamber.
3. The method of claim 2, wherein the drying gas comprises gaseous nitrogen.
4. The method of claim 1, wherein the antistatic agent comprises carbon dioxide.
5. The method of claim 1, wherein the antistatic agent comprises ionized clean dry air.
6. The method of claim 1, wherein the step of drying the one or more semiconductor wafers comprises introducing a drying enhancement substance into the processing chamber.
7. The method of claim 6, wherein the drying enhancement substance comprises isopropyl alcohol.

8. The method of claim 1, further comprising performing at least one additional processing step on the at least one or more semiconductor wafers in the processing chamber.
9. The method of claim 8, wherein the at least one additional processing step comprises a rinsing step that precedes the drying step.
10. The method of claim 9, wherein at least a portion of the rinsing step occurs in the presence of an antistatic agent.
11. The method of claim 10, wherein the antistatic agent comprises a gaseous antistatic agent.
12. The method of claim 10, wherein the antistatic agent comprises solute in a rinsing fluid.
13. The method of claim 10, wherein the gaseous antistatic agent present during at least a portion of the rinsing step comprises carbon dioxide.
14. The method of claim 10, wherein the gaseous antistatic agent present during at least a portion of the rinsing step comprises ionized clean dry air.
15. A method for controlling surface charging of semiconductor wafers, the method comprising the steps of:
  - providing one or more semiconductors wafers in a processing chamber;
  - performing a processing step on the one or more semiconductor wafers in the processing chamber;
  - performing a drying step on the one or more semiconductor wafers in the processing chamber; and

introducing gaseous carbon dioxide into the processing chamber during at least a portion of the drying step.

16. The method of claim 15, wherein the step of performing a processing step on the one or more semiconductor wafers comprises a step of rinsing the one or more semiconductor wafers in the processing chamber.
17. The method of claim 16, further comprising the step of introducing gaseous carbon dioxide into the processing chamber during at least a portion of the rinsing step.
18. The method of claim 15, wherein the step of introducing gaseous carbon monoxide comprises further comprises introducing a carrier gas.
19. The method of claim 18, wherein the carrier gas comprises nitrogen.
20. A method for controlling surface charging of semiconductor wafers processed in a spray processor, the method comprising the steps of:
  - providing one or more semiconductor wafers in a processing chamber of a spray processor;
  - performing a chemical treatment step on the one or more semiconductor wafers in the processing chamber;
  - performing a rinsing step on the one or more semiconductor wafers in the processing chamber;
  - performing a drying step on the one or more semiconductor wafers in the processing chamber; and
  - introducing gaseous carbon dioxide into the processing chamber during at least a portion of the rinsing step and at least a portion of the drying steps.

21. The method of claim 20, wherein the rinsing step is performed after the chemical treatment step.
22. The method of claim 20, wherein the drying step is performed after the rinsing step.
23. The method of claim 20, wherein the step of introducing gaseous carbon dioxide into the processing chamber comprises introducing gaseous carbon dioxide into the processing chamber during substantially all of the rinsing step.
24. The method of claim 20, wherein the step of introducing gaseous carbon dioxide into the processing chamber comprises introducing gaseous carbon dioxide into the processing chamber during substantially all of the drying step.
25. A method of processing a semiconductor wafer, the method comprising:
  - providing a semiconductor wafer in a processing chamber of a spray processor;
  - spraying a rinsing fluid onto at least a portion of a surface of the semiconductor wafer in an atmosphere comprising a gaseous antistatic agent; and
  - drying at least a portion of the semiconductor wafer in an atmosphere comprising a gaseous antistatic agent.